



39

SEQUENCE LISTING

<110> Dixit, Vishva M.

<120> CD40 BINDING COMPOSITIONS AND METHODS OF
USING SAME

<130> 128019201702

<140> 09/224,556

<141> 1998-12-30

<150> 08/826,577

<151> 1997-04-02

<150> 08/404,832

<151> 1995-03-13

<160> 16

<170> FastSEQ for Windows Version 3.0

<210> 1

<211> 2339

<212> DNA

<213> Homo sapiens

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gacctaggat cagaaacctg gctcctggct cctgctccct actcttctaa ggatcgctgt      180
cctgacagaa gagaactcct ctttcctaaa atg gag tcg agt aaa aag atg gac      234
                               Met Glu Ser Ser Lys Lys Met Asp
                               1                               5

tct cct ggc gcg ctg cag act aac ccg ccg cta aag ctg cac act gac      282
Ser Pro Gly Ala Leu Gln Thr Asn Pro Pro Leu Lys Leu His Thr Asp
    10                               15                               20

cgc agt gct ggg acg cca gtt ttt gtc cct gaa caa gga ggt tac aag      330
Arg Ser Ala Gly Thr Pro Val Phe Val Pro Glu Gln Gly Gly Tyr Lys
    25                               30                               35                               40

gaa aag ttt gtg aag acc gtg gag gac aag tac aag tgt gag aag tgc      378
Glu Lys Phe Val Lys Thr Val Glu Asp Lys Tyr Lys Cys Glu Lys Cys
                45                               50                               55

cac ctg gtg ctg tgc agc ccg aag cag acc gag tgt ggg cac cgc ttc      426
His Leu Val Leu Cys Ser Pro Lys Gln Thr Glu Cys Gly His Arg Phe
                60                               65                               70

tgc gag agc tgc atg gcg gcc ctg ctg agc tct tca agt cca aaa tgt      474
Cys Glu Ser Cys Met Ala Ala Leu Leu Ser Ser Ser Ser Pro Lys Cys
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75	80	85	
aca gcg tgt caa gag agc atc gtt aaa gat aag gtg ttt aag gat aat Thr Ala Cys Gln Glu Ser Ile Val Lys Asp Lys Val Phe Lys Asp Asn 90 95 100			522
tgc tgc aag aga gaa att ctg gct ctt cag atc tat tgt cgg aat gaa Cys Cys Lys Arg Glu Ile Leu Ala Leu Gln Ile Tyr Cys Arg Asn Glu 105 110 115 120			570
agc aga ggt tgt gca gag cag tta atg ctg gga cat ctg gtg cat tta Ser Arg Gly Cys Ala Glu Gln Leu Met Leu Gly His Leu Val His Leu 125 130 135			618
aaa aat gat tgc cat ttt gaa gaa ctt cca tgt gtg cgt cct gac tgc Lys Asn Asp Cys His Phe Glu Glu Leu Pro Cys Val Arg Pro Asp Cys 140 145 150			666
aaa gaa aag gtc ttg agg aaa gac ctg cga gac cac gtg gag aag gcg Lys Glu Lys Val Leu Arg Lys Asp Leu Arg Asp His Val Glu Lys Ala 155 160 165			714
tgt aaa tac cgg gaa gcc aca tgc agc cac tgc aag agt cag gtt ccg Cys Lys Tyr Arg Glu Ala Thr Cys Ser His Cys Lys Ser Gln Val Pro 170 175 180			762
atg atc gcg ctg cag aaa cac gaa gac acc gac tgt ccc tgc gtg gtg Met Ile Ala Leu Gln Lys His Glu Asp Thr Asp Cys Pro Cys Val Val 185 190 195 200			810
gtg tcc tgc cct cac aag tgc agc gtc cag act ctc ctg agg agc gag Val Ser Cys Pro His Lys Cys Ser Val Gln Thr Leu Leu Arg Ser Glu 205 210 215			858
ttg agt gca cac ttg tca gag tgt gtc aat gcc ccc agc acc tgt agt Leu Ser Ala His Leu Ser Glu Cys Val Asn Ala Pro Ser Thr Cys Ser 220 225 230			906
ttt aag cgc tat ggc tgc gtt ttt cag ggg aca aac cag cag atc aag Phe Lys Arg Tyr Gly Cys Val Phe Gln Gly Thr Asn Gln Gln Ile Lys 235 240 245			954
gcc cac gag gcc agc tcc gcc gtg cag cac gtc aac ctg ctg aag gag Ala His Glu Ala Ser Ser Ala Val Gln His Val Asn Leu Leu Lys Glu 250 255 260			1002
tgg agc aac tcg ctc gaa aag aag gtt tcc ttg ttg cag aat gaa agt Trp Ser Asn Ser Leu Glu Lys Lys Val Ser Leu Leu Gln Asn Glu Ser 265 270 275 280			1050
gta gaa aaa aac aag agc ata caa agt ttg cac aat cag ata tgt agc Val Glu Lys Asn Lys Ser Ile Gln Ser Leu His Asn Gln Ile Cys Ser 285 290 295			1098
ttt gaa att gaa att gag aga caa aag gaa atg ctt cga aat aat gaa Phe Glu Ile Glu Ile Glu Arg Gln Lys Glu Met Leu Arg Asn Asn Glu 300 305 310			1146

tcc aaa atc ctt cat tta cag cga gtg ata gac agc caa gca gag aaa 1194
 Ser Lys Ile Leu His Leu Gln Arg Val Ile Asp Ser Gln Ala Glu Lys
 315 320 325

ctg aag gag ctt gac aag gag atc cgg ccc ttc cgg cag aac tgg gag 1242
 Leu Lys Glu Leu Asp Lys Glu Ile Arg Pro Phe Arg Gln Asn Trp Glu
 330 335 340

gaa gca gac agc atg aag agc agc gtg gag tcc ctc cag aac cgc gtg 1290
 Glu Ala Asp Ser Met Lys Ser Ser Val Glu Ser Leu Gln Asn Arg Val
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acc gag ctg gag agc gtg gac aag agc gcg ggg caa gtg gct cgg aac 1338
 Thr Glu Leu Glu Ser Val Asp Lys Ser Ala Gly Gln Val Ala Arg Asn
 365 370 375

aca ggc ctg ctg gag tcc cag ctg agc cgg cat gac cag atg ctg agt 1386
 Thr Gly Leu Leu Glu Ser Gln Leu Ser Arg His Asp Gln Met Leu Ser
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gtg cac gac atc cgc cta gcc gac atg gac ctg ggc ttc cag gtc ctg 1434
 Val His Asp Ile Arg Leu Ala Asp Met Asp Leu Gly Phe Gln Val Leu
 395 400 405

gag acc gcc agc tac aat gga gtg ctc atc tgg aag att cgc gac tac 1482
 Glu Thr Ala Ser Tyr Asn Gly Val Leu Ile Trp Lys Ile Arg Asp Tyr
 410 415 420

aag cgg cgg aag cag gag gcc gtc atg ggg aag acc ctg tcc ctt tac 1530
 Lys Arg Arg Lys Gln Glu Ala Val Met Gly Lys Thr Leu Ser Leu Tyr
 425 430 435 440

agc cag cct ttc tac act ggt tac ttt ggc tat aag atg tgt gcc agg 1578
 Ser Gln Pro Phe Tyr Thr Gly Tyr Phe Gly Tyr Lys Met Cys Ala Arg
 445 450 455

gtc tac ctg aac ggg gac ggg atg ggg aag ggg acg cac ttg tcg ctg 1626
 Val Tyr Leu Asn Gly Asp Gly Met Gly Lys Gly Thr His Leu Ser Leu
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ttt ttt gtc atc atg cgt gga gaa tat gat gcc ctg ctt cct tgg ccg 1674
 Phe Phe Val Ile Met Arg Gly Glu Tyr Asp Ala Leu Leu Pro Trp Pro
 475 480 485

ttt aag cag aaa gtg aca ctc atg ctg atg gat cag ggg tcc tct cga 1722
 Phe Lys Gln Lys Val Thr Leu Met Leu Met Asp Gln Gly Ser Ser Arg
 490 495 500

cgt cat ttg gga gat gca ttc aag ccc gac ccc aac agc agc agc ttc 1770
 Arg His Leu Gly Asp Ala Phe Lys Pro Asp Pro Asn Ser Ser Ser Phe
 505 510 515 520

aag aag ccc act gga gag atg aat atc gcc tct ggc tgc cca gtc ttt 1818
 Lys Lys Pro Thr Gly Glu Met Asn Ile Ala Ser Gly Cys Pro Val Phe
 525 530 535

42

gtg gcc caa act gtt cta gaa aat ggg aca tat att aaa gat gat aca 1866
Val Ala Gln Thr Val Leu Glu Asn Gly Thr Tyr Ile Lys Asp Asp Thr
540 545 550

att ttt att aaa gtc ata gtg gat act tcg gat ctg ccc gat ccc 1911
Ile Phe Ile Lys Val Ile Val Asp Thr Ser Asp Leu Pro Asp Pro
555 560 565

tgataagtag ctggggaggt ggatttagca gaaggcaact cctctggggg atttgaaccg 1971
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<213> Homo sapiens

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Val Pro Glu Gln Gly Gly Tyr Lys Glu Lys Phe Val Lys Thr Val Glu
35 40 45
Asp Lys Tyr Lys Cys Glu Lys Cys His Leu Val Leu Cys Ser Pro Lys
50 55 60
Gln Thr Glu Cys Gly His Arg Phe Cys Glu Ser Cys Met Ala Ala Leu
65 70 75 80
Leu Ser Ser Ser Ser Pro Lys Cys Thr Ala Cys Gln Glu Ser Ile Val
85 90 95
Lys Asp Lys Val Phe Lys Asp Asn Cys Cys Lys Arg Glu Ile Leu Ala
100 105 110
Leu Gln Ile Tyr Cys Arg Asn Glu Ser Arg Gly Cys Ala Glu Gln Leu
115 120 125
Met Leu Gly His Leu Val His Leu Lys Asn Asp Cys His Phe Glu Glu
130 135 140
Leu Pro Cys Val Arg Pro Asp Cys Lys Glu Lys Val Leu Arg Lys Asp
145 150 155 160
Leu Arg Asp His Val Glu Lys Ala Cys Lys Tyr Arg Glu Ala Thr Cys
165 170 175
Ser His Cys Lys Ser Gln Val Pro Met Ile Ala Leu Gln Lys His Glu
180 185 190
Asp Thr Asp Cys Pro Cys Val Val Val Ser Cys Pro His Lys Cys Ser
195 200 205
Val Gln Thr Leu Leu Arg Ser Glu Leu Ser Ala His Leu Ser Glu Cys
210 215 220
Val Asn Ala Pro Ser Thr Cys Ser Phe Lys Arg Tyr Gly Cys Val Phe
225 230 235 240
Gln Gly Thr Asn Gln Gln Ile Lys Ala His Glu Ala Ser Ser Ala Val
245 250 255
Gln His Val Asn Leu Leu Lys Glu Trp Ser Asn Ser Leu Glu Lys Lys
260 265 270

49

Val Ser Leu Leu Gln Asn Glu Ser Val Glu Lys Asn Lys Ser Ile Gln
 275 280 285
 Ser Leu His Asn Gln Ile Cys Ser Phe Glu Ile Glu Ile Glu Arg Gln
 290 295 300
 Lys Glu Met Leu Arg Asn Asn Glu Ser Lys Ile Leu His Leu Gln Arg
 305 310 315 320
 Val Ile Asp Ser Gln Ala Glu Lys Leu Lys Glu Leu Asp Lys Glu Ile
 325 330 335
 Arg Pro Phe Arg Gln Asn Trp Glu Glu Ala Asp Ser Met Lys Ser Ser
 340 345 350
 Val Glu Ser Leu Gln Asn Arg Val Thr Glu Leu Glu Ser Val Asp Lys
 355 360 365
 Ser Ala Gly Gln Val Ala Arg Asn Thr Gly Leu Leu Glu Ser Gln Leu
 370 375 380
 Ser Arg His Asp Gln Met Leu Ser Val His Asp Ile Arg Leu Ala Asp
 385 390 395 400
 Met Asp Leu Gly Phe Gln Val Leu Glu Thr Ala Ser Tyr Asn Gly Val
 405 410 415
 Leu Ile Trp Lys Ile Arg Asp Tyr Lys Arg Arg Lys Gln Glu Ala Val
 420 425 430
 Met Gly Lys Thr Leu Ser Leu Tyr Ser Gln Pro Phe Tyr Thr Gly Tyr
 435 440 445
 Phe Gly Tyr Lys Met Cys Ala Arg Val Tyr Leu Asn Gly Asp Gly Met
 450 455 460
 Gly Lys Gly Thr His Leu Ser Leu Phe Phe Val Ile Met Arg Gly Glu
 465 470 475 480
 Tyr Asp Ala Leu Leu Pro Trp Pro Phe Lys Gln Lys Val Thr Leu Met
 485 490 495
 Leu Met Asp Gln Gly Ser Ser Arg Arg His Leu Gly Asp Ala Phe Lys
 500 505 510
 Pro Asp Pro Asn Ser Ser Ser Phe Lys Lys Pro Thr Gly Glu Met Asn
 515 520 525
 Ile Ala Ser Gly Cys Pro Val Phe Val Ala Gln Thr Val Leu Glu Asn
 530 535 540
 Gly Thr Tyr Ile Lys Asp Asp Thr Ile Phe Ile Lys Val Ile Val Asp
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 Thr Ser Asp Leu Pro Asp Pro
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 Gln Thr Glu Cys Gly His Arg Phe Cys Glu Ser Cys Met Ala Ala Leu
 20 25 30
 Leu Ser Ser Ser Ser Pro Lys Cys Thr Ala Cys Gln Glu Ser Ile Val
 35 40 45
 Lys

<210> 4
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<213> Homo sapiens

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Ala	Lys	Tyr	Leu	Cys	Ser	Ala	Cys	Lys	Asn	Ile	Leu	Arg	Arg	Pro	Phe
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Gln	Ala	Gln	Cys	Gly	His	Arg	Tyr	Cys	Ser	Phe	Cys	Leu	Thr	Ser	Ile
			20					25					30		
Leu	Ser	Ser	Gly	Pro	Gln	Asn	Cys	Ala	Ala	Cys	Val	Tyr	Glu	Gly	Leu
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Tyr	Glu														
	50														

<210> 5

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<400> 5

Lys	Ser	Ile	Ser	Cys	Gln	Ile	Cys	Glu	His	Ile	Leu	Ala	Asp	Pro	Val
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Glu	Thr	Asn	Cys	Lys	His	Val	Phe	Cys	Arg	Val	Cys	Ile	Leu	Arg	Cys
			20					25					30		
Leu	Lys	Val	Met	Gly	Ser	Tyr	Cys	Pro	Ser	Cys	Arg	Tyr	Pro	Cys	Phe
		35					40					45			
Pro															

<210> 6

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Ser	Glu	Leu	Met	Cys	Pro	Ile	Cys	Leu	Asp	Met	Leu	Lys	Asn	Thr	Met
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Thr	Thr	Lys	Glu	Cys	Leu	His	Arg	Phe	Cys	Ser	Asp	Cys	Ile	Val	Thr
			20					25					30		
Ala	Leu	Arg	Ser	Gly	Asn	Lys	Glu	Cys	Pro	Thr	Cys	Arg	Lys	Lys	Leu
		35					40					45			
Val	Ser														
	50														

<210> 7

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Glu	Glu	Val	Thr	Cys	Pro	Ile	Cys	Leu	Asp	Pro	Phe	Val	Glu	Pro	Val
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Ser	Ile	Glu	Cys	Gly	His	Ser	Phe	Cys	Gln	Glu	Cys	Ile	Ser	Gln	Val
			20					25					30		
Gly	Lys	Gly	Gly	Gly	Ser	Val	Cys	Pro	Val	Cys	Arg	Gln	Arg	Phe	Leu
		35					40					45			
Leu															

<210> 8
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20 25 30
Leu Ser Val Asp Ser Lys Cys Pro Leu Cys Arg Ala Thr Asp Gln Glu
35 40 45

<210> 9
<211> 50
<212> PRT
<213> Homo sapiens

<400> 9
Asn Lys Tyr Thr Cys Pro Ile Cys Phe Glu Phe Ile Tyr Lys Lys Gln
1 5 10 15
Ile Tyr Gln Cys Lys Ser Gly His His Ala Cys Lys Glu Cys Trp Glu
20 25 30
Lys Ser Leu Glu Thr Lys Lys Glu Cys Met Thr Cys Lys Ser Val Val
35 40 45
Asn Ser
50

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<400> 11
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<400> 12
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<400> 13
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<400> 14
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<210> 15
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<212> DNA
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<400> 15
agaggagttg ccttctgc

18

<210> 16
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18